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Variation of sunshine with height in NW England

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Monthly sunshine totals in hours/day for the years 1963-1969 were analysed for the following stations

Carlisle	86 feet above MSL
Dumfries	140
Newton Rigg	560
Eskdalemuir	800
Spadeadam	900
Moor House	1825
Great Dun Fell	2780

The gradients of sunshine decrease with height, were as follows:-

Month	Correlation	Gradient hrs/day/100 ft	Gradient hrs/day/100 m
January	-0.99	0.034	0.11
February	-0.96	0.039	0.13
March	-0.98	0.052	0.17
April	-0.99	0.069	0.23
May	-0.93	0.067	0.22
June	-0.83	0.060	0.20
July	-0.92	0.064	0.21
August	-0.94	0.066	0.22
September	-0.97	0.054	0.18
October	-0.94	0.049	0.16
November	-0.97	0.040	0.13
December	-0.97	0.026	0.09

The June values included some suspect observations from Moor House; omitting these the gradient becomes 0.069.

Any comments or suggestions on this paper should be referred to the author.

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Bracknell